

### **REMARKS**

Claims 1-51 remain pending in the application. Claims 1, 5, 6, 21, 24, 25, 37, 40, 41, 42, 45, and 50 have been amended. Support for the amendments can be found in the specification. Reconsideration of the claims as amended is respectfully requested.

### **CLAIM OBJECTIONS**

Examiner's statement-1. Claims 1, 21, 37, and 40 remain objected to for the inclusion of a blank line where the ATCC accession number should be.

Applicants have deposited 2,500 seeds with the ATCC. Attached is the copy of the deposit receipt. Claims 1, 6, 21, 25, 37, and 40 have been amended to include the deposit Accession Number "PTA-4260".

Examiner's statement-2. Claims 1, 2, 3 (amended) 4, 5-6 (both amended), 7, 8 (amended), 9-13, 14-16 (all amended), 17, 21, 22 (amended), 23, 24-25 (both amended), 26, 27, (amended), 28-32. 33-35 (all amended), 36-40, 41 (amended) 42, 43 (amended), 44, and 45-46 (both amended) remain and new claims 50-51 are rejected under the judicially created doctrine of obviousness-type double patenting.

As pointed out on pages 5-6 of the Applicants' first Office Action Response dated 10/30/01, PH3PG and PH1W0 differ for various traits that are not minor. Ample evidence of the differences was provided. Applicants also point out a deposit of 2,500 seeds of PH3PG has been made with the ATCC. Claims 1, 6, 21, 25, 37, and 40 have been amended to include the deposit Accession Number "PTA-4260".

In light of the above Applicants respectfully request that the Examiner reconsider and withdraw the rejection to claims 1-51 under doctrine of obviousness-type double patenting.

Examiner's statement-3. Claims 4, 5, (amended), 23, and 24 (amended) remain and claims 6 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for the reasons of record stated in the Office action mailed 01 August 2001 on page 4 under item 5.

In the previous office action dated 8/01/01, the Examiner suggests that "claims 4 and 23 be amended to indicate that the tissue culture regenerates plants having all of the physiological and morphological characteristics of maize inbred line PH3PG." Applicants traverse this rejection based on the fact that what is being claimed is a tissue culture of regenerable cells. These cells being taken from the claimed invention and with knowledge known to one of ordinary skill in the art are formed into cultures. The cells contain the genetics being used in the cultures. Protocols are well known and varied for this type of use. In the previous office action dated 8/01/01, the Examiner goes on to reject claims 6 and 25 and states the following, "the claims now read on somaclonal variants that do not retain PH3PG-derived genetic material." Applicants have amended claims 6 and 25 by inserting "capable of expressing all the morphological and physiological characteristics of inbred line PH3PG, representative seed of which have been deposited under ATCC Accession No. PTA-4260." Thus, the claim does not cover plants regenerated from somaclonal variants that are not capable of expressing all the morphological and physiological characteristics of inbred line PH3PG.

Examiner's statement-4. Claims 1, 2, 3, (amended) 4, 5-6 (both amended), 7, 8, (amended), 9-13, 14-16 (all amended), 17-20, 21, 22 (amended), 23, 24-25 (both amended), 26, 27, (amended), 28-32, 33-35 (all amended), 36-40, 41 (amended), 42, 43 (amended), 44, and 45-46 (both amended), 47-49 remain and new claims 50-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for the reasons of record stated in the Office action mailed 01 August 2001 on page 4 under item 6 for claims 1-49.

In the previous office action dated 8/01/01, under item 6 the Examiner states, "...the name appears to be arbitrary and the specific characteristics associated with therewith could be modified, as there is no claimed description of the maize plant that encompasses all of its traits. Amending claims 1, 6, 21, 25, 37, and 40 to recite the ATCC deposit number in which seed of maize inbred line PH3PG has been deposited would overcome the rejection." Applicants point out that a deposit of 2,500 seeds of PH3PG has been made with the ATCC. Claims 1, 6, 21, 25, 37, and 40 have been amended to include the deposit Accession Number "PTA-4260".

Examiner's statement-5. Claims 17, 36, and 43 (amended) remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for the reasons of record stated in the Office action mailed 01 August 2001 on page 6 under item 12.

In the previous office action dated 8/01/01, under item 12 the Examiner states, "The claims are indefinite in that it is unclear what would constitute the maize plants and parts, given that they are products of multiple crosses and it is unclear what characteristics said plants and plant parts would have. With regard to claims 17 and 36, it remains unclear how many generations would be encompassed by the breeding program of the claim from which they depend." The Applicants respectfully argue that the plants derived from breeding with PH3PG are within the scope of the invention. The claims clearly say that crosses are made to inbred maize line PH3PG. This means that plants developed utilizing the genetic make-up of PH3PG transferred via crosses are within the scope of the invention. Use of the genetics of PH3PG, use of the PH3PG plant to make crosses, and the ultimate result of a plant with PH3PG-derived genetics is within the scope of the invention. If one does not use PH3PG to develop a plant, then this is not within the scope of the invention because the unique invention, PH3PG, was not used.

Examiner's statement-6. Claims 1, 2, 3 (amended) 4, 5-6 (both amended), 7, 8 (amended), 9-13, 14-16 (all amended), 17-20, 21, 22 (amended), 23, 24-25 (both amended), 26, 27, (amended), 28-32, 33-35 (all amended), 36-40, 41 (amended) 42, 43 (amended), 44, and 45-46 (both amended), 47-49 remain and new claims 50 and 51 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, for the reasons of record stated in the Office action mailed 01 August 2001 on page 7 under item 14 for claims 1-49.

In the previous office action dated 8/01/01, under item 14 the Examiner states, "...If the deposit of seeds is made under the terms of the Budapest Treaty, then an affidavit or declaration by the applicants, or a statement by an attorney of record over his or her signature and registration number, stating that the seeds

will be irrevocably and without restriction or condition released to the public upon the issuance of a patent would satisfy the deposit requirement made herein....” Applicants have made a deposit under the terms of the Budapest Treaty. See amendments to the specification that state the terms.

Examiner's statement-7. Claims 1, 2, 3 (amended), 4, 5-6 (both amended), 7, 8 (amended), 9-13, 14-16 (all amended), 17, 21, 22 (amended), 23, 24-25 (both amended), 26, 27 (amended), 28-32, 33-35 (all amended) 36-40, 41 (amended), 42, 43, (amended), 44, and 45-46 (both amended) remain and new claims 50 and 51 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Piper (U.S. patent No. 6,188,001 B1), for the reasons of record stated in the last Office action on page 9 under item 15 for claims 1-17 and 21-46.

In the previous office action dated 7/05/01, under item 15, the Examiner states, “Amending claims 1, 6, 21, 25, 37, and 40 to include the ATCC accession number will overcome the rejection for claims 1-13, 15-17, 21-32, 34-40, and 42-44.” Applicants have added the ATCC accession numbers to the appropriate claims. The Examiner further states in the previous office action dated 8/01/01 that “...even with the inclusion number, the plants of claims 14, 33, 41, 45, and 46 are still taught by Piper as inbred line PH1W0 has at least two characteristics of PH3PG listed in those claims.” The claims clearly say that crosses are made to PH3PG and plants derived from making crosses to PH3PG are within the scope of the invention. This means that plants developed utilizing the genetic make-up of PH3PG transferred via crosses are within the scope of the invention. Use of the genetics of PH3PG, use of the PH3PG plant to make crosses, and the ultimate result of a plant with the genetics of PH3PG is within the scope of the invention. If one uses a plant other than PH3PG to develop a plant very similar in physical appearance and agronomic traits then this is not within the scope of the invention because the unique starting material, PH3PG, was not used. The claims also state that the PH3PG-derived plants must have 2 traits from PH3PG. These traits, such as yield and relative maturity, are controlled by many genes and are evidence that PH3PG has provided a genetic contribution to the progeny. Should the examiner maintain these rejections, Applicants

request that the Examiner specifically state, in accordance with 1.104(d), how PH3PG is rendered obvious by PH1W0.

Examiner's statement-8. New claim 50 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Examiner states that "Plants can display male sterility, not seed" and suggests the insertion of the word "factors" after the word "sterility". The claim has been amended as suggested by the Examiner.

10. Examiner states that insertion of the ATCC accession number into the claims will over come the obviousness-type double patenting rejection. Applicants have amended claims to include the accession numbers.

11. Examiner states that claims 4 and 23 should be amended to indicate that the tissue culture regenerates plants having all of the physiological and morphological characteristics of maize inbred line PH3PG in order to over come the rejection under 35 U.S.C. 112. Applicants refer to the arguments made and amendments pointed out in the response to Examiner's statement-3 above.

12. Examiner states that the "application is not in condition for allowance and the rejection is maintained" under 35 U.S.C. 112. Applicants have made the required deposit and the proper amendments to the claims thus obviating the rejection.

13. Examiner states that the "plants are not defined as the traits that the claimed plants possess are not defined." Thus the Examiner maintains rejection of claims 17, 36, and 43 under 35 U.S.C. 112, second paragraph. Applicants traverse the rejection. Applicants refer to the arguments made in response to the Examiner's statement-5 above.

14. Examiner states that the "application is not in condition for allowance and the rejection is maintained" under 35 U.S.C. 112. Applicants have made the required deposit and the proper amendments to the claims thus obviating the rejection.

15. Examiner states that the “application is not in condition for allowance and the rejection is maintained” for claims 1-5, 7-13, 15-17, 21-24, 26-32, 34-40, 42-44, 47-49, and new claims 50 and 51 under 35 U.S.C. 102(e) or 35 U.S.C. 103(a) until an ATCC deposit has been made and the appropriate claims amended with the ATCC accession number. Applicants have made the required deposit and the proper amendments to the claims thus obviating the rejection. The Examiner goes on to state that concerning claims 14, 33, 41, 45, and 46 that the claims do not mention the alleles or “genetics” of the cultivar PH3PG. The Applicants have amended claims 41 and 45 by deleting the phrase “said PH3PG-derived maize plant expressing a combination of at least two traits which are not significantly different from PH3PG when determined at a 5% significance level and when grown in the same environmental conditions, said traits selected from the group consisting of...” The scope of claims 41 and 45 are within one cross pollination of PH3PG. This limitation is stated through claim dependency.

Once again the Applicants would like to point out that the claims do mention the genetics of the cultivar PH3PG. The claims clearly say that crosses are made to PH3PG and plants derived from making crosses to PH3PG are within the scope of the invention. This means that plants developed utilizing the genetic make-up of PH3PG transferred via crosses are within the scope of the invention. Use of the genetics of PH3PG, use of the PH3PG plant to make crosses, and the ultimate result of a plant with PH3PG-derived genetics is within the scope of the invention. If one uses a plant other than PH3PG to develop a plant very similar in physical appearance and agronomic traits then this is not within the scope of the invention because the unique starting material, PH3PG, was not used. Should the examiner maintain these rejections, Applicants request that the Examiner specifically state, in accordance with 1.104(d), how PH3PG is rendered obvious by PH1W0.

The Examiner goes on to state that newly amended claims 6 and 25 “now read on somaclonal variants that do not retain PH3PG-derived genetic material”. Applicants again refer to the arguments made and amendments pointed out in the response to Examiner’s statement-3 above.

**CONCLUSION**

Attached hereto is a marked-up version of the changes made to the specification and claims by current amendment. The attached page is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE**".

Applicants submit that in light of the foregoing amendments and remarks, that claims 1-51, as amended, are in condition for allowance. Reconsideration and early notice of allowability is respectfully requested. If it is felt that it would aid in prosecution, the Examiner is invited to contact the undersigned at the number indicated to discuss any outstanding issues.

Respectfully submitted,  
Roy Luedtke, Jr. and Doug Paul Sprehe



Steven Callistein  
Reg. No. 43,525  
Attorney for Applicants

Steven Callistein  
Pioneer Hi-Bred International  
7100 NW 62<sup>nd</sup> Avenue  
P.O. Box 1000  
Johnston, IA 50131-1000  
(515)-254-2823  
Fax (515)-334-6883



**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION**

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At page 44, lines 2 – 21, following "Deposits", please delete the entire paragraph and insert the clean paragraph.

**IN THE CLAIMS**

Claims 1, 5, 6, 21, 24, 25, 37, 40, 41, 42, 45, and 50 have been amended as follows:

1. (Amended) Seed of maize inbred line designated PH3PG, representative seed of said line having been deposited under ATCC Accession No. [ \_\_\_\_\_ ] PTA-4260.

5. (Twice Amended) The tissue culture [according to] of claim 4, cells or protoplasts of the tissue culture being from a tissue source selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

6. (Twice Amended) A maize plant regenerated from the tissue culture of claim 4, capable of expressing all the morphological and physiological characteristics of inbred line PH3PG, representative seed of which have been deposited under ATCC Accession No. PTA-4260.

21. (Amended) A maize plant, or parts thereof, having all the physiological and morphological characteristics of inbred line PH3PG, representative seed of said line having been deposited under ATCC accession No. [ \_\_\_\_\_ ] PTA-4260.

24. (Twice Amended) The tissue culture [according to] of claim 23, cells or protoplasts of the tissue culture being from a tissue source selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

25. (Twice Amended) A maize plant regenerated from the tissue culture of claim 23, capable of expressing all the morphological and physiological characteristics of inbred



line PH3PG, representative seed of which have been deposited under ATCC Accession No. PTA-4260.

37. (Amended) A process for producing inbred PH3PG, representative seed of which have been deposited under ATCC Accession No. [ \_\_\_\_\_ ] PTA-4260, comprising:

- (a) planting a collection of seed comprising seed of a hybrid, one of whose parents is inbred PH3PG said collection also comprising seed of said inbred;
- (b) growing plants from said collection of seed;
- (c) identifying said inbred PH3PG plants;
- (d) selecting said inbred PH3PG plant; and
- (e) controlling pollination in a manner which preserves the homozygosity of said inbred PH3PG plant.

40. (Amended) A method for producing a PH3PG-derived maize plant, comprising:

- (a) crossing inbred maize line PH3PG, representative seed of said line having been deposited under ATCC Accession No. [ \_\_\_\_\_ ] PTA-4260, with a second maize plant to yield progeny maize seed;
- (b) growing said progeny maize seed, under plant growth conditions, to yield said PH3PG-derived maize plant.

41. (Twice Amended) A PH3PG-derived maize plant, or parts thereof, produced by the method of claim 40 [said PH3PG-derived maize plant expressing a combination of at least two PH3PG traits selected from the group consisting of : a relative maturity of approximately 81 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, good stalk lodging resistance, good root lodging resistance, good test weight, early maturity, low harvest moisture, high yields, above average early season growth and is adapted to the Northcentral region of the United States and Southern Manitoba, Canada].

42. (Amended) The method of claim 40, further comprising:

- (c) crossing said PH3PG-derived maize plant with itself or another maize plant to yield additional PH3PG-derived progeny maize seed;

- (d) growing said progeny maize seed of step (c) under plant growth conditions, to yield additional PH3PG-derived maize plants;
- (e) repeating the crossing and growing steps of (c) and (d) from [0 to 5 ] 1 to 4 times to generate further PH3PG-derived maize plants.

45. (Twice Amended) A PH3PG-derived maize plant, or parts thereof, produced by the method of claim 44 [,said PH3PG-derived maize plant expressing a combination of at least two PH3PG traits selected from the group consisting of : a relative maturity of approximately 81 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, good stalk lodging resistance, good root lodging resistance, good test weight, early maturity, low harvest moisture, high yields, above average early season growth and is adapted to the Northcentral region of the United States and Southern Manitoba, Canada] .

50. (Amended) The seed of claim 1 wherein said seed further comprises genetic or cytoplasmic male sterility factors.

# ATCC

10801 University Blvd • Manassas, VA 20110-2209 • Telephone: 703-365-2700 • FAX: 703-365-2745

The American Type Culture Collection (ATCC) has received your deposit of seeds in connection with the filing of an application for patent. The following information is provided to fulfill Patent Office requirements.

**Name and Address of Depositor:**

Pioneer Hi-Bred International, Inc,  
Attn: Kim M. Hagemann  
7100 NW 62<sup>nd</sup> Avenue  
PO BOX 1000  
Johnston, IA 50131-1000

**DOCKETED**

MAY 10, 2002

**Deposited on Behalf of:**

Pioneer Hi-Bred International, Inc.

**Date of Receipt of Seeds by the ATCC:**

May 3, 2002

**Scientific Description**

**Depositor's Reference Case No.**

**Patent Deposit Designation**

Inbred corn (maize) seed, Source C1PNE11404 RP	PH54H	1199 C	PTA-4259
Inbred corn (maize) seed, Source NW974PG CLN	PH3PG	1210	PTA-4260
Inbred corn (maize) seed, Source CH9751H CLN	PH51H	1204	PTA-4261
Inbred corn (maize) seed, Source CH971BCA MP	PH1BC	1241	PTA-4262
Inbred corn (maize) seed, Source C1KEK11093 PF	PH48V	1203	PTA-4263
Inbred corn (maize) seed, Source ZF975CT CLN	PH5CT	1232	PTA-4264

**The ATCC understands that:**

1. The deposit of these seeds does not grant ATCC a license, either express or implied, to infringe the patent, and our release of these seeds to others does not grant them a license or implied, to infringe the patent.
2. If these seeds should die or be destroyed during the effective term of the patent, it shall be your responsibility to replace them with living seeds of the same type. It is also your responsibility to supply a sufficient quantity for distribution for the deposit term.

Prior to the issuance of a U.S. Patent, the ATCC agrees in consideration for a one-time service charge, not to distribute these seeds or any information relating thereto or to their deposit except as instructed by the depositor or relevant patent office. After a relevant patent issues, and we are instructed to release the seeds, they will be made available for distribution to the public without any restrictions.

The ATCC agrees to maintain the seeds for a period of 30 years from deposit date, or 5 years after the most recent request for a sample, whichever is longer.

We will inform you of requests for the seeds for 30 years from date of deposit.

The seeds were tested May 8, 2002 and were viable.

American Type Culture Collection

By

Marie Harris  
Marie Harris, Patent Specialist  
ATCC Patent Depository

Date: May 28, 2002